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May 17, 2000

Rick Wilkin
U.S. Environmental Protection Agency
919 Kerr Reasearch Drive
Ada, OK 74820

RE: Request for Additional Data/Samples

Dear Rick:

Enclosed are the information you requested on the Asarco East Helena Smelter site. Specific items are discussed below:

1. Pumping test and slug test data, test descriptions, and interpretations for all wells within 1000 ft of the STW 1- 6 well cluster.

Various aquifer test data have been collected from monitoring wells within a 1000 foot radius of the Sparge 1 well cluster. I have enclosed a map showing highlighted well locations where aquifer testing has been conducted within this area and included associated time-drawdown graphs. Aquifer test investigations include the following:

- Aquifer pumping tests were conducted at 10 wells within your specified area of interest in 1987 and 1988 as part of the RI/FS investigation. The majority of these tests were single well pumping/recovery tests that ranged in duration from 1 to 24 hours. More comprehensive pumping tests were conducted at three sites (DH-13, DH-17 & EH-51) where piezometers were installed to monitor drawdown effects in the surrounding aquifer.
- Slug tests were conducted at 5 locations within the area of interest as part of the IM investigation. These wells are screened across the water table. The slug test response in these wells are therefore strongly influenced by sand pack effects.
- Additional aquifer testing is scheduled for mid June as part of the RFI investigation. This will include short-term single well pumping/recover tests at additional monitoring wells within the area of interest.

2. Geologic wells from wells within 1000 ft of the STW 1 - 6 well cluster.

Monitoring wells have been installed in this area as part of the original RI/FS at the site, and as part of the Interim Measures Groundwater Investigation and the Sparge Test Investigation. Well logs for all of the sites within the area of interest are enclosed. Sparge Test Monitoring well logs are included separately in the enclosed January 2001 Interim Measures Air Sparging Pilot Test Report.

3. Data from four most recent site-wide measurements of ground-water elevations and complete historical data base of measurements obtained in wells within 1000 ft of the STW 1 - 6 well cluster. Recent measurements of hydraulic heads in the wells used to demonstrate the effectiveness of air sparging.

A spreadsheet printout is attached with recent and historical water level measurements from wells within the area of interest. A sheet showing Fall 2000 and Spring 2001 data potentiometric maps are also included. Summary information on well elevations and completion depths is also attached. The spreadsheet files are also included on an enclosed disk in electronic format.

4. Copy of the recent air sparging effectiveness report.
A copy of the January 2001 Interim Measures Air Sparging Pilot Test Report is enclosed.

5. Results of any analyses that have been conducted to estimate ground-water seepage velocities, such as observations of changes in ground-water chemistry following source removals.
Although water quality improvements have been observed in response to source removal actions, water quality changes are gradual and groundwater flow velocities are difficult to estimate based on semi-annual monitoring data. Average groundwater velocities have been previously estimated to range from 2 to 5 feet per day based on general water quality trend observations and Darcy's Law estimates.

6. Any results of analyses for bromide or iodide that may have been conducted.
No bromide or iodide analyses have been conducted.

7. Ground water from DH-24 (~5 gallons)
Per your request in a follow-up conversation on May 16, 2001, Hydrometrics collected a water sample from STW-1 rather than DH-24. Five gallons of groundwater were shipped to you at the EPA Ada, Oklahoma office on May 16, 2001.

8. Soil material from the area around DH-24 (several kilograms if possible).
Per our recent discussion, there are limited archived soils available from previous soil borings in the vicinity of DH-24. Split samples will be collected from a new well, DH-64, that is being installed in this area within the next few weeks for the RFI. Split samples will be collected for EPA at this location during well installation and forwarded to EPA with a soil boring log.

If you have any questions regarding any of the enclosed information, please don't hesitate to call me.

Sincerely,

Bill Thompson
Sciences Manager

c: Jon Nickel – Asarco , East Helena (w/o enclosures)
✓Susan Zazzali – EPA, Helena (w/o enclosures)